# Kern Fan Groundwater Storage Project

## FEASIBILITY REPORT

## Additional Information Package

October 21, 2019 Updated April 13, 2020





### Table of Contents

#### I. Cover Letter

#### II. Additional Information Matrix

Item 1: WIIN vs. Water Storage Investment Program

Item 2: Cost Estimate and Technical Feasibility

- Item 3: Federal Benefits
- Item 4: Cost Allocation

Item 5: Financial Feasibility and Cost Sharing

Item 6: Reliability of Article 21 Water

Item 7: Interest During Construction

- Item 8: Water Rights Changes
- Item 9: Construction Schedule

Item 10: Environmental Feasibility and Compliance

#### III. Attachments

Attachment 1: Public Benefit Ratio Appeal Package

- Attachment 2: Water Storage Investment Program Technical Reference
- Attachment 3: Estimate of Benefits and Assumptions for the Wetland Ecosystem Benefit of the Kern Fan Groundwater Storage Project for the Water Infrastructure Improvement for the Nation Program (M.Cubed Technical Memorandum, 2020)
- Attachment 4: Groundwater Banking Joint Powers Authority Agreement
- Attachment 5: Irvine Ranch Water District Comprehensive Annual Financial Reports (2016, 2017, 2018, and 2019)
- Attachment 6: Rosedale-Rio Bravo Water Storage District Funding Capability Letter
- Attachment 7: Storage Integration Study (Association of California Water Agencies, 2020)
- Attachment 8: Preliminary Operations Plan
- Attachment 9: Kern County Water Agency Water Supply Contract
- Attachment 10: Dudley Ridge Water District Water Supply Contract
- Attachment 11: Change in Point of Delivery of Agreement (SWPAO #17030)
- Attachment 12: Project Schedule
- Attachment 13: CEQA and NEPA Schedule



April 13, 2020

Mr. John E. Simes, Jr. Acting Area Manager Bureau of Reclamation Southern California Area Office 27226 Via Industria, Suite A Temecula, CA 92590

Subject: WIIN Act Section 4007 – Kern Fan Groundwater Storage Project Request for Additional Information

Dear Mr. Simes:

Irvine Ranch Water District (IRWD) and Rosedale-Rio Bravo Water Storage District (Rosedale), the Project Sponsors for the Kern Fan Groundwater Storage Project (Project), have prepared additional Project information in response to Reclamation's request of February 24, 2020.

Enclosed is a matrix containing additional Project information, along with supplemental attachments, for the Review Team's consideration in its review of the Project documentation. In addition, as a result of completing a more refined Project design and cost estimate as requested, the Project Sponsors have determined that a different canal alignment would be the preferred alternative for the Project. To reflect this change in the project documentation, the Project Sponsors have updated the Project Feasibility Report. This updated Report is enclosed with this submittal. All revisions made to the text and tables are indicated in **bold font** so that they can be easily and clearly identified by the Review Team.

Please contact me at (949) 453-5325 or at <u>sanchezf@irwd.com</u>, if you have any questions regarding this submittal.

Sincerely,

fMSaxdd

Fiona M. Sanchez Director of Water Resources

Enclosures:

- 1. Kern Fan Groundwater Storage Project Additional Information Matrix with Attachments
- 2. Kern Fan Groundwater Storage Project Updated Feasibility Report dated April 13, 2020

<b>Bureau of Reclamation Comments</b>	Project Sponsor Response
1. WIIN vs. Water Storage Investment Program (WSIP): For the purposes of clarification, the Feasibility Report should better align with language in WIIN Section 4007. The Feasibility Report routinely discusses "public benefits," which is a term used as part of the WSIP application provided to the California Water Commission (CWC). WIIN Sec. 4007 requires that in return for Federal funding, a proportionate amount of benefits must be "federal benefits." All referenced supporting documentation and materials must be included with the feasibility report.	The Project Sponsors are pursuing funding for the construction of the Kern Fan Groundwater Storage Project through the State of California's Water Storage Investment Program (WSIP) and the Water Infrastructure for Improvements to the Nation (WIIN) Act. Under these two programs, different Project benefits are eligible for funding based on the legislation authorizing each program. The California Water Commission (CWC) is administering the WSIP to fund "public benefits" associated with eligible projects, including the Kern Fan Groundwater Storage Project. Under Section 79753(a) of the California Water Code public benefits include: ecosystem improvements, water quality improvements, emergency response, and recreation. For purposes of the WSIP, all other project benefits are considered "non-public" benefits. The conditional funding awarded by the CWC will pay a portion of the "public benefits". Section 4007(c)(2)(C) of the WIIN Act stipulates that " <i>in return for the Federal cost-share</i> <i>investment in the State-led storage project, at least a proportional share of the project</i> <i>benefits are the Federal benefits, including water supplies dedicated to specific purposes</i> <i>such as environmental enhancement and wild refuges</i> ". Taking all Project benefits into consideration, the Project Sponsors have identified two Federal benefits that are eligible for Federal funding under the WIIN Act, the Ecosystem benefit to Salmon in the Delta and Ecosystem Wetland benefit. For purposes of the WIIN Act, all other Project benefits will be referred to as non-Federal benefits.

## Kern Fan Groundwater Storage Project Additional Information

Benefit Category	Benefit Category	WSIP	WIIN Ac
Ecosystem Benefit-	Ecosystem Benefit-		Federal Der
Salmon	Salmon	ublic Benefit	Federal Bene
Ecosystem Benefit- Incidental Wetlands	Ecosystem Benefit- Incidental Wetlands	ublic Benefit	Federal Ben
Emergency Response- Extended	Emergency Response- Extended		Non-Federal
Drought	Drought	ublic Benefit	Benefit
Emergency Response-	Emergency Response-		Non-Federal
Delta Failure	Delta Failure	ublic Benefit	Benefit
Agricultural Direct Benefits- Crop	Agricultural Direct Benefits- Crop	Non-Public	Non-Federal
Substitution	Substitution	Benefit	Benefit
Water Supply Benefits-	Water Supply Benefits-	Non-Public	Non-Federal
Agriculture	Agriculture	Benefit	Benefit
		Non-Public	Non-Federal
Water Supply Benefits- M&I	Water Supply Benefits- M&I	Benefit	Benefit
		Non-Public	Non-Federal
Groundwater Benefits	Groundwater Benefits	Benefit	Benefit

#### 2. Cost Estimate and Technical Feasibility:

The review team determined that the Feasibility Report and drawings do not have adequate design details to be considered Feasibility Level. To determine a project technical feasibility, a feasibility-level cost estimate, as outlined in Reclamation Manual (RM) Directive and Standard (D&S), Cost Estimating, (FAC 09-01) is needed. Project estimates are to be at an Association for the Advancement of Cost Engineering International (AACEi) Level 3 and must "provide sufficient information to permit the preparation of preliminary layouts and designs from which approximate quantities for each kind, type, or class of material, equipment, or labor may be obtained. These estimates are to be used to assist in the selection of a preferred plan, to determine the economic feasibility of a project, and to support seeking construction authorization from Congress" (FAC 09-01 Paragraph C.l.c.). The submitted project documents are currently at a level 4. This project has not undergone an Independent Design, Estimating and Construction (DEC) Review, per RM Policy FAC PIO. Please also see the DEC Review information sheet enclosed. Uncertainty in the technical and a cost estimates are significantly increased without an independent DEC review.

#### **3. Federal Benefits:**

The review team requests any independent or peer reviews that have been conducted on the economic benefit analysis to estimate Federal benefits (Appendix F). The Preliminary Design Report, submitted as part of the Project Feasibility Report, was prepared by Dee Jaspar and Associates in October 2019, and contained an AACE Class 4 cost estimate. Preliminary design has been refined since the submittal of the Project Feasibility Report in October 2019. The previously submitted design report has been replaced with a 30% Design Report that includes an AACE Class 3 level cost estimate for all three alternatives and draft technical specifications. The Updated Feasibility Report includes the new 30% Design Report as Appendix D, which fully replaces the previously submitted design report.

As summarized below, a Class 3 cost estimate is appropriate for budget authorization and includes significantly more accuracy than a Class 4 cost estimate. In addition, the Class 3 estimate replaced most of the lump sum items included in the Class 4 estimates with quantities and cost data.

AACE Estimate	Level of Project Definition	End Usage	Accuracy (Low)	Accuracy (High)
Class 4	1% to 15%	Study or feasibility	-15% to -30%	+20% to +50%
Class 3	10% to 40%	Budget Authorization or Control	-10% to -20%	+10% to +30%

Other key enhancements included in the 30% Design are a revised estimate of where the Phase II lands are expected to be and a new preferred project canal alignment (the Buena Vista alternative) that is expected to have fewer environmental impacts.

The Project Feasibility Report has been updated to include the 30% Design Report (Appendix D) and to also reflect the new preferred project alignment. The updated Project Feasibility Report indicates changes to text and tables in **bold** font.

The California Water Commission (CWC) conducted its own independent peer review of the methodology used to estimate benefits. The approach to estimate benefits as part of the Water Storage Investment Program (WSIP) application was ultimately used in additionally estimating the Federal benefits in the Kern Fan Project Feasibility Report. The Project Sponsors prepared and submitted a Public Benefit Ratio Appeal that was provided to CWC on February 23, 2018, (see **Attachment 1**), which contains details of the CWC peer review

Additionally, the review team seeks explanation of public benefits paid for by WSIP funds in order to distinguish cost share responsibilities between the State and others. While completion of funding agreements with the CWC are still pending it	and a docum benefi The p	technical memorandum by M.Cubed (in Appe nent) that further substantiates the approaches its from the Kern Fan Project. ublic benefits to be funded by the CWC under	ndix E of the afo and unit values u the WSIP progra	rementioned "Appeal' sed to estimate um are as follows:
should be clear in the report that State funding will not increase the Federal cost share, and in fact may decrease the Federal cost share should any overlap		Benefit	Total Public Benefits	CWC Funding Amount
be identified.		Environmental Benefits – Fish Species Recovery	\$37,542,243	\$15,991,111
		Environmental Benefits – Wetland Habitat	\$162,578,480	\$29,921,451
		Emergency Response – Extended Drought	\$18,092,342	\$ 8,260,258
		Emergency Response – Delta Failure	\$29,621,603	\$13,364,496
		Total Amount to be Funded by CWC		\$67,537,315
	The P fundir occurr bold f	ct costs assigned to beneficiaries in Tables 5-6 Project Feasibility Report has been updated and ng will not increase the Federal cost share, and red. The updated Project Feasibility Report inc font.	and 5-7. further clarified that no overlap o licates changes to	to reflect that State or double counting has o text and tables in
<ul><li>3a. The Feasibility Report indicates that WIIN funds will be used for Ecosystem Benefit to Salmon (\$1.5M).</li><li>Are there any alternate estimates available to substantiate the WSIP valuation of \$100k per fish?</li></ul>	To event two approximation of two approximations of two clipped procurs. The unrecommendation of the two clipped process of two clipped p	aluate the Project's economic benefits to Chine pproaches, the willingness to pay approach and hose the least cost approach. The least cost app ring environmental water rather than the willin mit value of \$100,000 per fish used in the willin mended in the Water Storage Investment Prog prina Water Commission (CWC) reviewed num on and steelhead trout and ultimately found two for benefit transfer to winter-run and spring-ru	ook salmon, the I d alternative cost proach uses the al agness to pay app ngness to pay app gram (WSIP) Tec nerous valuation o studies that prov n Chinook salmo	Project Sponsors used approach, and of the ternative cost of roach. proach estimate was hnical Reference. The studies for west coast vided a reasonable on.

Hanemann's analysis was conducted for the San Joaquin River in 2005, prior to restoration activities, and it is unclear that this estimate can be transferred to the Feather River. Please provide evidence for why it is appropriate to transfer the analysis to the Feather River.	The first study (Hanemann, 2005) is a willingness to pay survey of 11.9 million California households that asked if people would vote for a bond measure that would " <i>Increase water flows in the San Joaquin River in order to restore the salmon runs</i> ". Hanemann's analysis is a reasonable source study for benefit transfer for the Kern Fan Groundwater Storage Project because of the benefit to the same and or similar species (Central Valley spring-run Chinook and Sacramento River winter-run Chinook) and similarity in demographics of beneficiaries (Californian households). While Hanemann's analysis was conducted for the San Joaquin River and the proposed Project would provide benefits to the Chinook in the Feather River, both rivers are part of the Sacramento-San Joaquin River Delta system. The second study (NOAA, 2014) that was used to determine the recommended \$100,000 per fish unit value, estimated the alternative costs of restoration for Central Valley Chinook salmon and steelhead at \$58,000 to \$120,000 per adult fish. Both sources of information, Hanemann (2005) and NOAA (2014), were used as the basis for the \$100,000 unit value for spring-run and winter-run Chinook. Further discussion on how the CWC concluded that the Hanemann analysis was appropriate for benefit transfer for WSIP projects and how the \$100,000 unit value for Chinook was determined, is included in the Technical Reference Section 5.4.2.3 and Technical Reference Appendix E, provided as <b>Attachment 2.</b>
<b>3b</b> . The Feasibility Report also indicates that WIIN funds will be used for Incidental Ecosystem Benefit to Wetlands (\$48.5M). It is not clear why wetland habitat benefits are incidental benefits. Are there any alternate estimates available to substantiate this benefit estimation?	As described in the Project Feasibility Report (Sections 1.4.3, 2.1.3, 4.1.4.2 and 5.1.3.2), the Project will establish temporary or incidental wetland habitat through intermittent recharge events. The primary purpose of the Project lands is to construct recharge basins that allow water to infiltrate and recharge into the underlying aquifer for storage until it is needed. During the years that the Project takes and recharges water into storage, the basins will be inundated with water and will provide wetland habitat to waterfowl, shorebirds, raptors and other migratory birds along the Pacific Flyway. The wetlands established by the Project are considered temporary or seasonal because the water supply delivered for recharge may not be available for recharge year-round or during periods of drought. The Project Sponsors use the term "incidental" to describe these wetlands because they are incidentally created as a result of water recharging in the Project basins. To estimate the economic benefits associated with the wetlands, the Applicants used the alternative cost approach. This is described in Appendix F of the Project Feasibility Report. The Project Sponsors considered several alternative cost approaches for the seasonal wetland benefit. The approaches include acquiring a short-term easement to

<b>4. Cost Allocation:</b> The assumption that the costs of Single Purpose Alternatives (SPAs) are greater than benefits needs to be supported by analysis, as this has not been universally observed in other projects. Moreover, specific costs need to be computed.	<ul> <li>create the wetlands, flooding lands that are already dedicated to groundwater recharge, and leasing land at a lower cost. The details of this analysis are provided in Appendix F of the Project Feasibility Report.</li> <li>To provide additional clarification on the alternative approaches of the benefit estimation, economists at M.Cubed prepared a technical memorandum on the wetland benefit. This memorandum discusses the feasibility issues with different alternative approaches to achieving the wetland benefit and substantiates the benefit estimate. Attachment 3 includes M.Cubed's technical memorandum and supporting documentation on the alternate estimates for wetland benefits.</li> <li>Specific costs of the Single Purpose Alternatives for each benefit category were calculated as part of the analysis conducted by MCubed as shown in Appendix F of the Project Feasibility Report. The specific costs for each benefit category are as follows:</li> </ul>				
		Type of Benefit	Alternative Cost Approach NPV of Benefits	Willingness to Pay Approach NPV of Benefits	Other Approach NPV of Benefits
		Water Supply Benefits – M&I	\$49 5M	-	-
		Water Supply Benefits - Agriculture	\$77.8M	-	-
		Water Supply Benefits - Groundwater	\$9.1M	-	-
		Environmental Benefits – Fish Species Recovery	\$37.5M	\$59.1M	-
		Environmental Benefits – Wetland Habitat	\$162.6M	-	-
		Emergency Response – Extended Drought	\$18.1M		-
		Emergency Response – Delta Failure	\$29.6M	-	-
		Agricultural Benefits	-	-	\$25.8M
	The co the ber the fish assume output	ost allocation presented in Section 5.2 nefits are equivalent to the costs of th h species recovery benefits, the least es that the agricultural water supply b of crops, as modeled in Appendix F	2 of the Proje e single purpo cost alternativ penefit is equiv of the Project	ect Feasibility R se alternative, o e. The cost allo valent to the inc Feasibility Rep	eport assumes that or in the case of cation also reased agricultural ort. Table 5-4 of

	the Feasibility Report has been updated to reflect this change from less than to equivalent to single purpose alternative.
<ul> <li>5. Financial Feasibility and Cost Sharing:</li> <li>Of the \$197.2M estimated construction cost for the project, the review team understands that it will be funded with 25% (\$49.3M) Federal cost share, and 34% (\$67.5M) from the State's WSIP funding.</li> <li>The report notes that a Joint Powers Authority (JPA) will be created but has not yet been secured. Without a JPA, the ability of the non-Federal sponsor to come up with upfront funding for the remaining 41% (\$80.4M) is unclear.</li> <li>A financial plan is needed to assess and determine a project financially feasible.</li> </ul>	An agreement Between Rosedale and IRWD creating the Groundwater Banking Authority (a Joint Powers Authority (JPA)) to develop and implement the Project was approved by both the Boards of Directors of Rosedale and IRWD and was executed on April 8, 2020. <b>Attachment 4</b> is a copy of the executed JPA agreement. The agreement provides for the Authority to fund all associated costs of planning, design and construction that are not funded by any and all Water Storage Improvement Project (WSIP) or other grant funding. It states Rosedale and IRWD shall each pay through the Authority one-half of the Kern Fan Project planning, design and construction costs that are not paid by awarded WSIP or other grant funds. The agreement includes provisions for the payment of the project costs including funding of the Authority made by Rosedale and IRWD. The estimated capital costs for the Project in 2018 dollars is approximately \$225.1M, which is an updated cost based on 30 percent design from the previously submitted number of \$197.2M. IRWD and Rosedale expect that the Project will be funded through state grant funding and local funding. State funding will potentially be through California Water Commission's Water Storage Investment Program (WSIP) up to \$67.5M. The JPA is also applying for federal funding. As stated in the Project Feasibility Report under Section 5.2.3, IRWD and Rosedale, as project sponsors, understand each agency is responsible for providing the difference between the grant amounts and the total project cost to ensure a fully funded project. IRWD and Rosedale are committed to jointly identifying and acquiring the property necessary to construct the water banking facilities, each paying for its share of capital construction costs and the full operation, maintenance and replacement costs for the proposed Kern Fan Groundwater Storage Project over the planning horizon.

The following table shows the expected cost estimates for the project components and the respective sources of funding. -Project costs are estimated in 2018 dollars.

		Kern Fan Groundwater Banking Project	%	Total
Project Cost (millions)				
	Total	\$225.1		
Funding Sources (millions)				
Water Storage Investment Program grant funding			30%	\$67.54
IRWD Funding			35%	\$78.78
Rosedale Funding			35%	\$78.78
	Total			\$225.1

**Estimated Project Construction Costs and Sources of Funding** 

#### IRWD Proposed Capital Project Funding Plan for Construction

IRWD's funding plan for capital costs and for operation, maintenance and replacement costs are described in the Project Feasibility Report in Sections 5.2.3.1 and 5.2.3.2. IRWD's capital budget is approved every two years and it represents those facilities that will begin construction during the next two fiscal years. The District's share of the Kern Fan Project anticipated capital expenditures for construction were added to IRWD's long-term capital program in 2019. Connection fees, general obligation (GO) property taxes, and one percent property tax revenues are considered primary funding sources for new capital such as the Kern Fan Project. The connection fees and GO property tax rates are reviewed and set annually to fund capital requirements to meet IRWD's ultimate water and recycled water demands of its customer base. IRWD's regional facilities, such as the Kern Fan Project, are generally funded through the sale of bonds. The District uses three primary sources of revenue to pay the debt service on the bonds. These sources are the District's allocation of one percent property tax revenue, connection fees that are funded from new development and GO property taxes that are paid by the homeowners for the sole purpose of funding District debt service.

In addition, IRWD has sufficient capital funds without having to issue bonds if it chooses. The four-year average for cash and investments for IRWD exceeds \$300M. **Attachment 5** contains links to electronic version of audited IRWD Comprehensive Annual Financial Report for 2016, 2017, 2018, and 2019.

	Rosedale Proposed Capital Project Funding Plan for Construction
	Rosedale's funding plan for capital costs and for operation, maintenance and replacement costs are described in the Project Feasibility Report in Section 5.2.3.3. Rosedale has prepared a letter which shows its capital project funding plan. <b>Attachment 6</b> contains Rosedale's letter.
	IRWD Funding Plan for Operation, Maintenance and Replacement costs
	IRWD's funding plan for operation, maintenance and replacement costs is described in Section 5.2.3.2 of the Project Feasibility Report. Every two years, the IRWD Board of Directors approves a two-year operating budget. IRWD's user rates and charges will be used to its share of fund operation, maintenance and replacement expenses for the Kern Fan Project.
	Rosedale Funding Plan for Operation, Maintenance and Replacement costs
	Rosedale's funding plan for operation, maintenance and replacement costs is described in Section 5.2.3.4. of the Project Feasibility Report. Rosedale's annual assessments will be used to fund its share of operation, maintenance and replacement expenses for the Kern Fan Project
<ul> <li>6. Reliability of Article 21 Water:</li> <li>From 2000 to 2017, 29 State Water Project contracts had an interest in Article 21 water.</li> <li>Deliveries of State Water Project (SWP) Article 21 water is highly variable in the last two decades. In eight of those years there were no deliveries of Article 21 water at all.</li> <li>The Feasibility Report should clearly address the likelihood of securing Article 21 water for the</li> </ul>	The Project Sponsors provided a description of the analytical approach used to estimate Article 21 water supplies available to the Project (see Page 4 of Appendix C of the Feasibility Report). The CalSim II model, jointly developed by the California Department of Water Resources (DWR) and Reclamation, was used to simulate operations of Central Valley Project (CVP) and State Water Project (SWP) in order to meet existing environmental and regulatory requirements, contract obligations, and other system requirements. The operation of the Project is then simulated in a spreadsheet model that layers the Project onto the CalSim II results. The Project benefits and effects are then determined and quantified by comparison of the with-Project and without-Project scenarios.
project when available, especially in competition with other State Water Project contractors.	The likelihood of the Project securing Article 21 water, after meeting all environmental, regulatory, contract and other system requirements is presented on

The Feasibility Report should document an operations plan or an agreement with SWP for this water.

Page 8 of Appendix C (see also excerpted figure shown below). As shown, the Project was estimated to receive an Article 21 supply in 16 years from 1922 to 2003. Based on this 82-year hydrologic time period, the Project received an Article 21 water supply about 19.5% of the time (16 years/82 years) or approximately once every 5 years (19.5% \* 5 years).



In addition to evaluating the project's performance over a historical hydrologic sequence, Page 16 of Appendix C describes an uncertainty analysis that analyzes project yields with potential future climate change, project performance during a critical drought and implementation of the California Water Fix. Although the Project performance changes for each uncertainty analysis, results indicate the Project continues to provide benefits.

Finally, a recent report by the Association of California Water Agencies (ACWA, June 2017) defines and quantifies the benefits of integrating the Project's operation along with other new storage projects being considered as part of the existing SWP and CVP. This Storage Integration Study is provided in **Attachment 7.** Key findings include:

- Significant surplus water is available,
- Integrating proposed and existing facilities expands benefits,
- New storage increases water supply and reliability,
- Integrated operation of new storage improves groundwater storage, and
- Significant surplus remains with new storage and improved delta conveyance

	Project Operations Plan
	An overview of the Project operations is provided on Page 1 of Appendix C of the Feasibility Report. In addition, Project Sponsors provide <b>Attachment</b> 8 as a preliminary operations plans which was included in the Project Sponsors' application under the Water Storage Improvement Program funding program.
	Agreements for SWP Water
	With regards to agreements for SWP water, Rosedale currently receives SWP water as a member unit of the Kern County Water Agency (KCWA), which is a SWP Contractor. As a member unit of the KCWA, Rosedale can receive Article 21 water when it is available. <b>Attachment 9</b> includes the KCWA State Water Project contract with the DWR, which provides for KCWA to receive SWP water including Article 21 water.
	IRWD is a landowner in the Dudley Ridge Water District (DRWD), a SWP Contractor, and has the rights to the use of SWP water including Article 21 water when it is available. <b>Attachment 10</b> includes the DRWD State Water Project contract with the DWR, which provides for DRWD to receive SWP water including Article 21 water.
<b>7. Interest During Construction (IDC):</b> No IDC should be incurred or included in the cost allocation. There is no recovery of Federal costs in this project (since Reclamation is funding non-reimbursable ecosystem enhancement benefits), the non-Federal sponsors are providing upfront funding for the non-Federal portion of the project.	The Project Sponsors have removed the Interest During Construction (IDC) from the updated economic analysis of the project alternatives and was removed from the cost allocation. The updated economic analysis of the project alternatives does not include IDC.
8. Water Rights Changes: The Feasibility Report should clearly state any additional or changes to existing water rights and the likelihood of obtaining those rights/changes.	The Project would not require any additional or changes to existing water rights or State Water Project Contracts. The storage and recovery of water stored in the Project would not impact groundwater rights or entitlements.

Specifically, is a change in the point of	Need for Change in Point of Delivery
water?	Rosedale currently receives SWP water as a member unit of the Kern County Water Agency (KCWA), which is also a SWP Contractor. A Change in Point of Delivery Agreement would not be required for Rosedale's delivery of Article 21 water or other SWP water supplies delivered to the Kern Fan Project since the project would be located within the KCWA service area.
	IRWD is a landowner in the Dudley Ridge Water District (DRWD), a SWP Contractor, and has the rights to the use of SWP water including Article 21 water when it is available. As also explained in Section 1.3.2, MWD is also a SWP Contractor, and IRWD receives SWP water supplies from the Municipal Water District of Orange County, a member unit of Metropolitan Water District of Southern California (MWD), also a SWP Contractor.
	IRWD and DRWD have successfully implemented unbalanced exchange programs, with the approval of MWD and the California Department of Water Resources (DWR), that facilitate the delivery of portions of IRWD's SWP water to IRWD's service area for dry year reliability. Although the water belongs to IRWD, one-half of all SWP supplies under these exchanges are returned to and used on IRWD's lands in DRWD. IRWD has received approval to store its SWP at its Strand Ranch banking project in Kern County on an unbalanced exchange basis. These exchanges require a Change in Point of Delivery Agreement because it is another SWP contractor's water delivered to Kern County. These unbalanced exchange programs have been implemented through Exchange and Change in Point of Delivery Agreements, which are approved by DWR, DRWD, KCWA and MWD. An example of the most recent Change in Point of Delivery Agreement among DWR, DRWD, MWD and KCWA is provided in <b>Attachment 11</b> . A similar agreement is envisioned for the SWP water (including Article 21 water) delivered in the Kern Fan Project on behalf of IRWD and DRWD.
<b>9. Construction Schedule:</b> Certain tasks need to be completed prior to the WIIN construction deadline of December 2021 (including establishing the JPA, development of a financial plan, environmental compliance, etc.), which increases the risk to project implementation.	The Kern Fan Groundwater Storage Project is expected to meet the construction deadlines stipulated by the WIIN Act. A detailed construction schedule has been provided as <b>Attachment 12</b> that shows certain key tasks being completed prior to the WIIN construction deadline of December 2021. This schedule is also included in Appendix J of the updated Project Feasibility Report.

10. Environmental Feasibility and Compliance:	The Kern Fan Groundwater Storage Project is subject to the environmental review process established in the California Environmental Quality Act (CEQA) and the National
National Environmental Policy Act compliance documents have not been completed and are needed to determine a project is environmentally feasible. If these documents are not going be completed with the feasibility report, please provide a schedule for completing the NEPA documents.	Environmental Policy Act (NEPA) to be considered for federal funding. A Supplemental Environmental Impact Report is being prepared in compliance with the CEQA and NEPA requirements for the proposed Kern Fan Groundwater Storage Project. Environmental review activities for the Kern Fan Project began in January 2020. A Notice of Preparation was released for public review on April 8, 2020. A draft Supplemental Environmental Impact is expected to be released in September 2020. A detailed schedule for environmental compliance activities is provided as <b>Attachment 13</b> .